

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A signal processing process system for recording and reproducing content information on a record medium having a record and reproduction apparatus that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the system comprising: content information being recorded to the record medium,

wherein the a record and reproduction apparatus including, comprises:

storage means for storing an electronic storage unit configured to store the first encrypted key,

a second encrypted key decryption unit configured to decrypt means for reproducing the second encrypted key encrypted and recorded on the record medium, the second encrypted key being decrypted and for decrypting the second encrypted key with the first encrypted key,

a third encrypted key generator configured to generate generation means for generating the third encrypted key,

an encryption means for encrypting unit configured to encrypt the third encrypted key with the decrypted second encrypted key,

a communication port configured to connect the record and reproduction apparatus to another device.

an authentication unit configured to authenticate means for authenticating the other device information process apparatus and generating generate a session key when the other device is successfully authenticated the authentication means has successfully authenticated the information process apparatus,

a first bus-encryption unit configured to further encrypt, with the session key, means for bus encrypting the second encrypted key that has been encrypted and recorded on the record medium with the session key and configured to transfer transferring the further encrypted bus encrypted second encrypted key to the other device information process apparatus,

a second bus-encryption unit configured to further encrypt means for bus encrypting the third encrypted key with the session key and configured to transfer the further encrypted transferring the bus encrypted third encrypted key to the other device information process apparatus,

a bus-decryption unit configured to decrypt means for bus decrypting encrypted and bus encrypted content information encrypted with the session key and the third encrypted key and supplied from the information process apparatus, and a recorder configured to record means for recording the third encrypted key and the encrypted content information to the record medium; [ , ] and wherein the an information processing process apparatus connected to the communication port of the record and reproduction apparatus, the information processing apparatus including, comprises:

an electronic storage unit configured to store means for storing the first encrypted key,

an authentication unit configured to authenticate means for authenticating the record and reproduction apparatus and configured to generate generating the session

key when the record and reproduction apparatus is authentication means has successfully authenticated the record and reproduction apparatus,  
a first bus-decryption unit configured to decrypt means for bus-decrypting the ~~bus-encrypted~~ second encrypted key encrypted with the session key,  
a decryption unit configured to further decrypt means for decrypting the second encrypted key with the first encrypted key,  
a second bus-decryption unit configured to decrypt means for bus-decrypting the ~~bus-encrypted~~ third encrypted key encrypted with the session key,  
a decryption unit configured to further decrypt means for decrypting the third encrypted key with the second encrypted key,  
an encryption unit configured to encrypt with the third encrypted key means for ~~encrypting~~ the content information transferred to the record and reproduction apparatus ~~with the third encryption~~, and  
a bus-encryption unit configured to further encrypt means for bus-encrypting the encrypted content information with the session key and configured to send ~~sending~~ the bus-encrypted content information to the record and reproduction apparatus.

Claim 2 (Currently Amended): The signal processing process system as set forth in claim 1, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about ~~a type of~~ the record medium, when the authentication unit means of the record and reproduction apparatus and the authentication

unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 3 (Currently Amended): The signal processing process system as set forth in claim 1, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about copyright, when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 4 (Currently Amended): The signal processing process system as set forth in claim 1, further comprising: wherein the record and reproduction unit includes a mask control unit configured to control masking of means for the third encrypted key, and wherein only the third encrypted key is written to the record medium when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus have mutually and successfully authenticated each other, ~~the third encrypted key can be written to the record medium.~~

Claim 5 (Currently Amended): A signal processing process system for recording and reproducing content information on a recording medium having a record and reproduction apparatus that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management

mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the system comprising: content information being recorded to the record medium,

wherein the a record and reproduction apparatus including, comprises:

a storage unit configured to store means for storing the first encrypted key,

a second encrypted key generation unit configured to generate means for generating the second encrypted key,

an encryption unit configured to encrypt means for encrypting the generated second encrypted key with the first encrypted key,

a third encrypted key generation unit configured to generate means for generating the third encrypted key,

an encryption unit configured to encrypt means for encrypting the third encrypted key with the generated second encrypted key,

a communication port configured to connect the record and reproduction apparatus to another device,

an authentication unit configured to authenticate the device connected to the communication port, the authentication unit means for authenticating the information process apparatus and generating a session key when the device connected to the communication port is authentication means has successfully authenticated the information process apparatus,

a first bus-encryption means unit configured to further encrypt for bus-encrypting the second encrypted key with the session key and configured to transfer transferring the further encrypted bus-encrypted second encrypted key to the device connected to the communication port information process apparatus,

a second bus-encryption unit configured to further encrypt means for bus-encrypting the third encrypted key with the session key and configured to transfer transferring the further encrypted bus-encrypted third encrypted key to the device connected to the communication port information process apparatus,

a bus-decryption unit configured to decrypt means for bus-decrypting the encrypted and bus-encrypted content information encrypted with the third encrypted key and the session key, and supplied from the device connected to the communication port information process apparatus, and

a record unit configured to record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium; [,,] and

wherein the an information process apparatus including comprises:

a storage unit configured to store means for storing the first encrypted key, an authentication unit configured to authenticate means for authenticating the record and reproduction apparatus and configured to generate generating the session key when the authentication means has successfully authenticated the record and reproduction apparatus is authenticated,

a first bus-decryption unit configured to decrypt means for bus-decrypting the bus-encrypted second encrypted key with the session key,

a decryption unit configured to further decrypt means for decrypting the second encrypted key with the first encrypted key,

a second bus-decryption unit configured to decrypt means for bus-decrypting the bus-encrypted third encrypted key with the session key,

a decryption unit configured to further decrypt means for decrypting the third encrypted key with the second encrypted key,

an encryption unit configured to encrypt means for encrypting the content information transferred to the record and reproduction apparatus with the third encryption key, and

a bus-encryption unit configured to further encrypt means for bus-encrypting the encrypted content information with the session key and configured to send the further encrypted sending the bus-encrypted content information to the record and reproduction apparatus.

Claim 6 (Currently Amended): The signal processing process system as set forth in claim 5, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about a type of the record medium, when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 7 (Currently Amended): The signal processing process system as set forth in claim 5, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about copyright when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 8 (Currently Amended): The signal process system as set forth in claim 5, ~~further comprising: wherein the record and reproduction unit include a first mask control unit configured to control masking of means for the third encrypted key, and a second mask control unit configured to control masking of means for the second encrypted key, the third encrypted key and the second encrypted key being written to the record medium wherein only when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus have mutually and successfully authenticated each other, the third encrypted key and the second encrypted key can be written to the record medium.~~

Claim 9 (Currently Amended): A signal processing process system for recording and reproducing content information on a recording medium having a record and reproduction apparatus that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, ~~the system comprising: content information being recorded to the record medium,~~

~~wherein the a record and reproduction apparatus including comprises:~~

~~an electronic storage unit configured to store means for storing the first encrypted key,~~

~~a second encrypted key decryption unit configured to reproduce means for reproducing the second encrypted key encrypted and recorded on the record medium~~

and configured to decrypt for decrypting the second encrypted key with the first encrypted key,

a third encrypted key generation unit configured to generate means for generating the third encrypted key,

an encryption unit configured to encrypt means for encrypting the third encrypted key with the decrypted second encrypted key,

a communication port configured to connect the record and reproduction apparatus to another device,

an authentication unit configured to authenticate the other device means for authenticating the information process apparatus and configured to generate generating a session key when the other device is authentication means has successfully authenticated the information process apparatus,

a bus-decryption unit configured to decrypt, with the session key, means for bus-decrypting the bus-encrypted content information supplied from the information process apparatus,

an encryption unit configured to encrypt means for encrypting the content information with the third encrypted key, and

a record unit configured to record means for recording the third encrypted key and the encrypted content information to the record medium; [[,]] and  
wherein the an information processing process apparatus including, comprises:

an authentication unit configured to authenticate means for authenticating the record and reproduction apparatus and configured to generate generating the session key when the information process apparatus has successfully authenticated the record and reproduction apparatus is successfully authenticated, and

a bus-encryption unit configured to encrypt means for bus-encrypting content information transferred to the record and reproduction apparatus with the session key and configured to send the encrypted sending the bus-encrypted content information to the record and reproduction apparatus.

Claim 10 (Currently Amended): The signal processing process system as set forth in claim 9, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about a type of the record medium when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 11 (Currently Amended): The signal processing process system as set forth in claim 9, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about copyright when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the generated random number data therebetween.

Claim 12 (Currently Amended): The signal processing process system as set forth in claim 9, further comprising: wherein the record and reproduction apparatus includes a mask control unit configured to control masking of means for the third encrypted key, the third

encrypted key being written to the record medium wherein only when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus have mutually and successfully authenticated each other, the third encrypted key can be written to the record medium.

Claim 13 (Currently Amended): A signal processing process system for recording and reproducing content information on a recording medium having a record and reproduction apparatus that reads information from a record medium and records information thereto, and an information process apparatus to which the record and reproduction apparatus is connected through transfer means, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the system comprising: content information being recorded to the record medium,

wherein the a record and reproduction apparatus including, comprises:

an electronic storage unit configured to store means for storing the first encrypted key,

a second encrypted key generation unit configured to generate means for generating the second encrypted key,

an encryption unit configured to encrypt means for encrypting the generated second encrypted key with the first encrypted key,

a third encrypted key generation unit configured to generate means for generating the third encrypted key,

an encryption unit configured to encrypt means for encrypting the third encrypted key with the generated second encrypted key,

a communication port configured to connect the record and reproduction apparatus to another device,

an authentication unit configured to authenticate the other device means for authenticating the information process apparatus and configured to generate generating a session key when the other device is authentication means has successfully authenticated the information process apparatus,

a bus-decryption unit configured to decrypt means for bus-decrypting the bus-encrypted content information encrypted with the session key and supplied from the other device information process apparatus,

an encryption unit configured to encrypt means for encrypting the content information with the third encrypted key, and

a record unit configured to record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium; [.,.] and

wherein the an information processing process apparatus including, comprises:

an authentication unit configured to authenticate means for authenticating the record and reproduction apparatus and configured to generate generating the session key when the information process apparatus has successfully authenticated the record and reproduction apparatus is successfully authenticated, and

a bus-encryption unit configured to encrypt means for bus-encrypting content information with the session key and configured to send the encrypted sending the bus-encrypted content information to the record and reproduction apparatus.

Claim 14 (Currently Amended): The signal processing process system as set forth in claim 13, wherein the authentication unit means of the record and reproduction apparatus and

the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about ~~a type~~ of the record medium when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the ~~generated~~ random number data therebetween.

Claim 15 (Currently Amended) The signal process system as set forth in claim 13, wherein the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus mix a random number transferred from the record and reproduction apparatus to the information processing process apparatus with information about copyright when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus exchange the ~~generated~~ random number data therebetween.

Claim 16 (Currently Amended): The signal process system as set forth in claim 13, ~~further comprising: wherein the record and reproduction apparatus includes a first mask control unit configured to control masking of means for the third encrypted key, and a second mask control unit configured to control masking of means for the second encrypted key, the third encrypted key and the second encrypted key being written to the record medium wherein only~~ when the authentication unit means of the record and reproduction apparatus and the authentication unit means of the information processing process apparatus have mutually and successfully authenticated each other, ~~the third encrypted key and the second encrypted key can be written to the record medium.~~

Claim 17 (Currently Amended): A record and reproduction apparatus, ~~that is connected to an information processing process apparatus, for reading and recording, to a record medium, through transfer means and that reads information from a record medium and records content information thereto, content information being encrypted according to content information encryption method~~ using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, ~~the content information being recorded to the record medium~~, the record and reproduction apparatus comprising:

~~a storage unit configured to store means for storing the first encrypted key; [,,]~~

~~a second encrypted key decryption unit configured to reproduce means for reproducing the second encrypted key encrypted and recorded on the record medium and configured to decrypt for decrypting the second encrypted key with the first encrypted key; [,,]~~

~~a third encrypted key generation unit configured to generate means for generating the third encrypted key; [,,]~~

~~an encryption unit configured to encrypt means for encrypting the third encrypted key with the decrypted second encrypted key; [,,]~~

~~an authentication unit configured to authenticate means for authenticating the information processing process apparatus and configured to generate generating a session key when the authentication means has successfully authenticated the information processing process apparatus is successfully authenticated; [,,]~~

~~a first bus-encryption unit configured to further encrypt, with the session key, means for bus-encrypting the second encrypted key that has been encrypted and recorded on the record medium with the session key and configured to transfer the further encrypted~~

~~transferring the bus-encrypted~~ second encrypted key to the information processing process apparatus; [[,]]

~~a second bus-encryption unit configured to further encrypt means for bus-encrypting~~  
the third encrypted key with the session key and configured to transfer the further encrypted  
~~transferring the bus-encrypted~~ third encrypted key to the information processing process apparatus; [[,]]

~~a bus-decryption unit configured to decrypt, with the session key, means for bus-decrypting encrypted and bus-encrypted~~ content information encrypted with both the session key and the third encrypted key and supplied from the information processing process apparatus; and [[,]]

~~a record unit configured to record means for recording~~ the third encrypted key and the encrypted content information to the record medium,

wherein the ~~encrypted and bus-encrypted~~ content information is encrypted with the third encrypted key and the encrypted content information is further encrypted bus-encrypted with the session key generated by the information processing process apparatus.

Claim 18 (Currently Amended): The record and reproduction apparatus as set forth in claim 17, wherein the authentication unit means mixes a random number, that is also transferred to the information processing process apparatus, with information about a type of the record medium when the authentication unit means exchanges random number data with the information processing process apparatus.

Claim 19 (Currently Amended): The record and reproduction apparatus as set forth in claim 17, further comprising:

a mask control unit configured to control masking of means for the third encrypted key, the third encrypted key being written to the record medium wherein only when the authentication unit means has successfully authenticated the information processing process apparatus, the third encrypted key can be written to the record medium.

Claim 20 (Currently Amended): A record and reproduction apparatus, ~~that is connected to an information processing process apparatus, for reading and recording, to a record medium, through transfer means and that reads information from a record medium and records content information thereto, content information being encrypted according to content information encryption method~~ using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, ~~the content information being recorded to the record medium~~, the record and reproduction apparatus comprising:

a storage unit configured to store means for storing the first encrypted key; [,,]

a second encrypted key generation unit configured to generate means for generating the second encrypted key; [,,]

an encryption unit configured encrypt means for encrypting the generated second encrypted key with the first encrypted key; [,,]

a third encrypted key generation unit configured to generate means for generating the third encrypted key; [,,]

an encryption unit configured to encrypt means for encrypting the third encrypted key with the generated second encrypted key; [,,]

an authentication unit configured to authenticate means for authenticating the information processing process apparatus and configured to generate generating a session key

when the ~~authentication means~~ has successfully authenticated the information processing process apparatus is successfully authenticated; [[,]]

a first bus-encryption unit configured to further encrypt means for bus-encrypting the second encrypted key with the session key and configured to transfer transferring the bus-encrypted second encrypted key to the information processing process apparatus; [[,]]

a second bus-encryption unit configured to further encrypt means for bus-encrypting the third encrypted key with the session key and configured to transfer transferring the bus-encrypted third encrypted key to the information processing process apparatus; [[,]]

a bus-decryption unit configured to decrypt, with the session key, means for bus-decrypting the encrypted and bus-encrypted content information encrypted with both the third encrypted key and the session key and supplied from the information processing process apparatus; [[,]] and

a record unit configured to record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium,

wherein the encrypted and bus-encrypted content information is bus-encrypted further encrypted with the session key generated by the information processing process apparatus.

Claim 21 (Currently Amended): The record and reproduction apparatus as set forth in claim 20, wherein the authentication unit means mixes a random number, transferred to the information process apparatus, with information about a type of the record medium when the authentication unit means exchanges random number data with the information processing process apparatus.

Claim 22 (Currently Amended): The record and reproduction apparatus as set forth in claim 20, further comprising:

a first mask control unit configured to control masking of means for the third encrypted key; [[,]] and

a second mask control unit configured to control masking of means for the second encrypted key,

wherein only the third encrypted key and the second encrypted key are written to the record medium when the authentication means has successfully authenticated the information processing process apparatus, the third encrypted key and the second encrypted key can be written to the record medium.

Claim 23 (Currently Amended): A record and reproduction apparatus, ~~that is connected to an information processing process apparatus, for reading and recording, to a record medium, through transfer means and that reads information from a record medium and records content information thereto, content information being encrypted according to content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium,~~ the record and reproduction apparatus comprising:

an electronic storage unit configured to store means for storing the first encrypted key; [[,]]

a second encrypted key decryption unit configured to reproduce means for reproducing the second encrypted key encrypted and recorded to the record medium and configured to decrypt for decrypting the second encrypted key with the first encrypted key; [[,]]

a third encrypted key generation unit configured to generate means for generating the third encrypted key; [ , ]

an encryption unit configured to encrypt means for encrypting the third encrypted key with the decrypted second encrypted key; [ , ]

an authentication unit configured to authenticate means for authenticating the information processing process apparatus and configured to generate generating a session key when the authentication means has successfully authenticated the information processing process apparatus is successfully authenticated; [ , ]

a bus-decryption unit configured to decrypt means for bus-decrypting the bus-encrypted content information encrypted with the session key and supplied from the information processing process apparatus; [ , ]

an encryption unit configured to encrypt means for encrypting the content information with the third encrypted key; [ , ] and

a record unit configured to record means for recording the third encrypted key and the encrypted content information to the record medium,

wherein the bus-encrypted content information is encrypted with the third encrypted key and the session key the encrypted content information that has been bus-encrypted with the session key generated by the information process apparatus.

Claim 24 (Currently Amended): The record and reproduction apparatus as set forth in claim 23, wherein the authentication unit means mixes a random number, that is also transferred to the information process apparatus, with information about a type of the record medium when the authentication unit means exchanges random number data with the information processing process apparatus.

Claim 25 (Currently Amended): The record and reproduction apparatus as set forth in claim 23, further comprising:

a mask control unit configured to control masking of means for the third encrypted key,

wherein the third encrypted key is written to the record medium only when the authentication means has successfully authenticated the information processing process apparatus, the third encrypted key can be written to the record medium.

Claim 26 (Currently Amended): A record and reproduction apparatus, that is connected to an information processing process apparatus, for reading and recording, to a record medium, through transfer means and that reads information from a record medium and records content information thereto, content information being encrypted according to content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, the record and reproduction apparatus comprising:

a storage unit configured to store means for storing the first encrypted key; [,,]

a second encrypted key generation unit configured to generate means for generating the second encrypted key; [,,]

an encryption unit configured to encrypt means for encrypting the generated second encrypted key with the first encrypted key; [,,]

a third encrypted key generation unit configured to generate means for generating the third encrypted key; [,,]

an encryption unit configured to encrypt means for encrypting the third encrypted key with the generated second encrypted key; [,,]

an authentication unit configured to authenticate means for authenticating the information processing process apparatus and configured to generate generating a session key when the authentication means has successfully authenticated the information processing process apparatus is authenticated; [[,]]

a bus-decryption unit configured to decrypt, using the session key, means for bus-decrypting the bus-encrypted content information encrypted with the third encryption key and the session key and supplied from the information processing process apparatus; [[,]]

an encryption unit configured to encrypt means for encrypting the content information with the third encrypted key; [[,]] and

a record unit configured to record means for recording the second encrypted key, the third encrypted key, and the encrypted content information to the record medium, wherein the bus-encrypted content information is the encrypted content information that has been further encrypted bus-encrypted with the session key generated by the information processing process apparatus.

Claim 27 (Currently Amended): The record and reproduction apparatus as set forth in claim 26, wherein the authentication unit means mixes a random number, that is also transferred to the information processing process apparatus, with information about a type of the record medium when the authentication unit means exchanges random number data with the information processing process apparatus.

Claim 28 (Currently Amended): The record and reproduction apparatus as set forth in claim 26, further comprising:

a first mask control unit configured to control masking of means for the third encrypted key; [[,]] and

a second mask control unit configured to control masking of means for the second encrypted key,

wherein the third encrypted key and the second encrypted key are written to the record medium only when the authentication means has successfully authenticated the information processing process apparatus, the third encrypted key and the second encrypted key can be written to the record medium.

Claim 29 (Currently Amended): A record method of causing a record and reproduction apparatus, and an information processing apparatus connected thereto, to read and record that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in causing the record and reproduction apparatus; to store the first encrypted key,

reproducing, in causing the record and reproduction apparatus, to reproduce the second encrypted key encrypted and recorded on the record medium; and decrypting, in the record and reproduction apparatus, the second encrypted key with the first encrypted key; [[,]]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [,,]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the decrypted second encrypted key; [[,]]

authenticating, in causing the record and reproduction apparatus, to authenticate the information processing process apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus is authenticated; [,,]

encrypting, in causing the record and reproduction apparatus and with the session key, to bus encrypt the second encrypted key that has been encrypted and recorded on the record medium; with the session key and transfer

transferring the bus-encrypted second encrypted key, encrypted with the first encrypted key and the session key, to the information process apparatus; [,,]

encrypting, in causing the record and reproduction apparatus, to bus-encrypt the third encrypted key with the session key; and transfer the bus-encrypted

transferring the third encrypted key, encrypted with the session key, to the information processing process apparatus; [,,]

decrypting, in causing the record and reproduction apparatus and with the session key, to bus-decrypt the encrypted and bus-encrypted content information encrypted with the third encrypted key and the session key and supplied from the information processing process apparatus; [,,]

causing the record and reproduction apparatus to record the third encrypted key and the encrypted content information [[to]] in the record medium; [,,]

storing, in causing the information process apparatus, to store the first encrypted key; [,,]

authenticating, in causing the information process apparatus, to authenticate the record and reproduction apparatus; and generate

generating, in the information processing apparatus, the session key when the information process apparatus has successfully authenticated the record and reproduction apparatus is authenticated; [[,]]

decrypting, in causing the information processing process apparatus, the to bus-decrypt the bus-encrypted second encrypted key with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, to decrypt the second encrypted key with the first encrypted key; [[,]]

decrypting, in causing the information processing process apparatus, the to bus-decrypt the bus-encrypted third encrypted key with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, to decrypt the third encrypted key with the second encrypted key; [[,]]

encrypting, in causing the information processing process apparatus and with the third encrypted key, to encrypt the content information transferred to the record and reproduction apparatus, with the third encryption, and

further encrypting, in causing the information processing process apparatus and with the session key, to bus-encrypt the encrypted content information; with the session key and send

sending the bus-encrypted content information encrypted with the third encryption key and the session key from the information processing apparatus to the record and reproduction apparatus.

Claim 30 (Currently Amended): The record method as set forth in claim 29, wherein in the authenticating at the authentication step of the record and reproduction apparatus and in

the authenticating the authentication step of the information processing process apparatus, a random number transferred from the record and reproduction apparatus to the information processing process apparatus is mixed with information about a type of the record medium when the generated random number data are is exchanged therebetween.

Claim 31 (Currently Amended): The record method as set forth in claim 29, wherein in the authenticating at the authentication step of the record and reproduction apparatus and in the authenticating the authentication step of the information processing process apparatus, a random number transferred from the record and reproduction apparatus to the information processing process apparatus is mixed with information about copyright when the generated random number data are is exchanged therebetween.

Claim 32 (Currently Amended): The record method as set forth in claim 29, further comprising the step of:

controlling masking of mask-controlling the third encrypted key,  
wherein the third encrypted key is written to the record medium only when at the authentication step of the record and reproduction apparatus and the authentication step of the information processing process apparatus, they have been mutually and successfully authenticated each other, the third encrypted key can be written to the record medium.

Claim 33 (Currently Amended): A record method of causing a record and reproduction apparatus, and an information processing apparatus connected thereto, to read and record that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information being encrypted according to a content information

~~enryption method~~ using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in causing the record and reproduction apparatus; to store the first encrypted key;

generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [ , ]

encrypting, in causing the record and reproduction apparatus, the to encrypt the generated second encrypted key with the first encrypted key; [ , ]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [ , ]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the generated second encrypted key; [ , ]

authenticating, in causing the record and reproduction apparatus, to authenticate the information processing process apparatus, and generate a session key being generated when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [ , ]

further encrypting, in causing the record and reproduction apparatus, to bus encrypt the second encrypted key with the session key; and transfers the bus encrypted transferring the further encrypted second encrypted key from the record and reproduction apparatus to the information processing process apparatus; [ , ]

further encrypting, in causing the record and reproduction apparatus, to bus encrypt the third encrypted key with the session key; and transfer the bus encrypted

transferring the further encrypted third encrypted key from the record and  
reproduction apparatus to the information processing process apparatus; [[,]]  
decrypting, in causing the record and reproduction apparatus and with the session key,  
~~to bus~~ ~~decrypt the encrypted and bus-encrypted~~ content information encrypted with the third  
encrypted key and the session key and supplied from the information processing process  
apparatus; ~~, and~~

causing the record and reproduction apparatus to record the second encrypted key, the  
third encrypted key, and the encrypted content information to the record medium; ~~, and~~

storing the first encrypted key in causing the information processing process  
apparatus; ~~to store the first encrypted key,~~

authenticating, in causing the information processing process apparatus, ~~to~~  
~~authenticate~~ the record and reproduction apparatus, and generate the session key being  
generated when the information processing process apparatus has successfully authenticated  
the record and reproduction apparatus; [[,]]

decrypting, in causing the information processing process apparatus, ~~the to bus-~~  
~~decrypt the bus-encrypted~~ second encrypted key with the session key,

further decrypting, in causing the information processing process apparatus, ~~to~~  
~~decrypt~~ the second encrypted key with the first encrypted key; [[,]]

decrypting, in causing the information processing process apparatus, ~~the to bus-~~  
~~decrypt the bus-encrypted~~ third encrypted key with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, ~~to~~  
~~decrypt~~ the third encrypted key with the second encrypted key; [[,]]

encrypting, in causing the information processing process apparatus and with the third  
encrypted key, to encrypt the content information transferred to the record and reproduction  
apparatus; ~~with the third encryption, and~~

further encrypting, in causing the information processing process apparatus, to bus-encrypt the encrypted content information with the session key; and send the bus-encrypted sending the further encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 34 (Currently Amended): The record method as set forth in claim 33, wherein in the authenticating at the authentication step of the record and reproduction apparatus and in the authenticating the authentication step of the information processing process apparatus, a random number transferred from the record and reproduction apparatus to the information processing process apparatus is mixed with information about a type of the record medium when [[the]] generated random number data are exchanged therebetween.

Claim 35 (Currently Amended): The record method as set forth in claim 33, wherein in the authenticating at the authentication step of the record and reproduction apparatus and in the authenticating the authentication step of the information processing process apparatus, a random number transferred from the record and reproduction apparatus to the information processing process apparatus is mixed with information about copyright when [[the]] generated random number data are exchanged therebetween.

Claim 36 (Currently Amended): The record method as set forth in claim 33, further comprising the steps of:

controlling masking of mask controlling the third encrypted key; [[,]] and controlling masking of mask controlling the second encrypted key,  
wherein the third encrypted key and the second encrypted key are written to the record medium only when at the authentication step of the record and reproduction apparatus

and the authentication step of the information processing process apparatus, they have been mutually and successfully authenticated each other, the third encrypted key and the second encrypted key can be written to the record medium.

Claim 37 (Currently Amended): A record method of causing a record and reproduction apparatus, and an information processing apparatus connected thereto, to read and record that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in causing the record and reproduction apparatus, to store the first encrypted key,

reproducing, in causing the record and reproduction apparatus, to reproduce the second encrypted key encrypted and recorded on the record medium; and decrypt

decrypting the second encrypted key with the first encrypted key; [,,]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [,,]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the decrypted second encrypted key; [,,]

authenticating, in causing the record and reproduction apparatus, to authenticate the information processing process apparatus, and generate a session key being generated when

the record and reproduction apparatus has successfully authenticated the information  
processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus and with the session key,  
~~to bus decrypt the bus encrypted content information encrypted with the session key and~~  
supplied from the information processing process apparatus; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the content  
information with the third encrypted key; [[,]]

causing the record and reproduction apparatus to record the third encrypted key and  
the encrypted content information to the record medium; ~~and~~

authenticating, in causing the information processing process apparatus, ~~to~~  
~~authenticate~~ the record and reproduction apparatus, ~~and generate~~ the session key being  
generated when the information processing process apparatus has successfully authenticated  
the record and reproduction apparatus; ~~and~~

encrypting, in causing the information processing process apparatus and with the  
session key, to bus encrypt content information transferred to the record and reproduction  
apparatus; ~~with the session key and send the bus encrypted~~  
~~sending the encrypted~~ content information from the information processing apparatus  
to the record and reproduction apparatus.

Claim 38 (Currently Amended): The record method as set forth in claim 37, wherein  
in the authenticating at the authentication step of the record and reproduction apparatus and in  
the authenticating the authentication step of the information processing process apparatus, a  
random number transferred from the record and reproduction apparatus to the information  
processing process apparatus is mixed with information about ~~a type of~~ the record medium  
when [[the]] generated random number data are exchanged therebetween.

Claim 39 (Currently Amended): The record method as set forth in claim 37, wherein in the authenticating at the authentication step of the record and reproduction apparatus and in the authenticating the authentication step of the information processing process apparatus, a random number transferred from the record and reproduction apparatus to the information processing process apparatus is mixed with information about copyright when [[the]] generated random number data are exchanged therebetween.

Claim 40 (Currently Amended): The record method as set forth in claim 37, further comprising the step of:

controlling masking of mask-controlling the third encrypted key, wherein the third encrypted key is written to the record medium only when at the authentication step of the record and reproduction apparatus and the authentication step of the information processing process apparatus, they have been mutually and successfully authenticated each other, the third encrypted key can be written to the record medium.

Claim 41 (Currently Amended): A record method of causing a record and reproduction apparatus, and an information processing apparatus connected thereto, to read and record that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in causing the record and reproduction apparatus, to store the first encrypted key,

generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the generated second encrypted key with the first encrypted key; [.,.]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the generated second encrypted key; [.,.]

authenticating, in causing the record and reproduction apparatus, to authenticate the information processing process apparatus, and generate a session key being generated when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [.,.]

decrypting, in causing the record and reproduction apparatus, to bus-decrypt the bus-encrypted content information encrypted with the session key and supplied from the information processing process apparatus; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the content information with the third encrypted key; [.,.]

causing the record and reproduction apparatus to record the second encrypted key, the third encrypted key, and the encrypted content information to the record medium; [.,.]

authenticating, in causing the information processing process apparatus, to authenticate the record and reproduction apparatus, and generate the session key being generated when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; , and

encrypting, in causing the information processing process apparatus, to bus encrypt  
content information with the session key; and send the bus encrypted  
sending the encrypted content information to the record and reproduction apparatus.

Claim 42 (Currently Amended): The record method as set forth in claim 41, wherein  
in the authenticating at the authentication step of the record and reproduction apparatus and in  
the authenticating the authentication step of the information processing process apparatus, a  
random number transferred from the record and reproduction apparatus to the information  
processing process apparatus is mixed with information about a type of the record medium  
when [[the]] generated random number data are exchanged therebetween.

Claim 43 (Currently Amended): The record method as set forth in claim 41, wherein  
in the authenticating at the authentication step of the record and reproduction apparatus and in  
the authenticating the authentication step of the information processing process apparatus, a  
random number transferred from the record and reproduction apparatus to the information  
processing process apparatus is mixed with information about copyright when [[the]]  
generated random number data are exchanged therebetween.

Claim 44 (Currently Amended): The record method as set forth in claim 41, further  
comprising the steps of:

controlling masking of mask controlling the third encrypted key; [[,]] and  
controlling masking of mask controlling the second encrypted key,  
wherein the third encrypted key and the second encrypted key are written to the  
record medium only when at the authentication step of the record and reproduction apparatus  
and the authentication step of the information processing process apparatus, they have been

mutually and successfully authenticated each other, the third encrypted key and the second encrypted key can be written to the record medium.

Claim 45 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in a causing the record and reproduction apparatus; to store the first encrypted key;

reproducing, in causing the record and reproduction apparatus, to reproduce the second encrypted key encrypted and recorded on the record medium;

encrypting, in the record and reproduction apparatus, and decrypt the second encrypted key with the first encrypted key; [.,.]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the decrypted second encrypted key; [.,.]

authenticating, in causing the record and reproduction apparatus, an to authenticate the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [[,]]

further encrypting, in causing the record and reproduction apparatus and with the session key, to bus encrypt the second encrypted key that has been encrypted and recorded on the record medium; with the session key and transfer the bus encrypted transferring the further encrypted second encrypted key from the record and reproduction apparatus to the information processing process apparatus; [[,]]

further encrypting, in causing the record and reproduction apparatus, to bus encrypt the third encrypted key with the session key; and transfer the bus encrypted transferring the further encrypted third encrypted key from the record and reproduction apparatus to the information processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus and with the session key, to bus decrypt the encrypted and bus encrypted content information encrypted with the third encrypted key and the session key and supplied from the information processing process apparatus; [[,]]

causing the record and reproduction apparatus to record the third encrypted key and the encrypted content information to the record medium; [[,]]

storing the first encrypted key in causing the information processing process apparatus; to store the first encrypted key,

authenticating, in causing the information processing process apparatus, to authenticate the record and reproduction apparatus; and generate

generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; [[,]]

decrypting, in causing the information processing process apparatus and with the session key, the to bus-decrypt the bus-encrypted second encrypted key with encrypted with the first encrypted key and the session key; [[,]]

further decrypting, in causing the information processing process apparatus, to decrypt the second encrypted key with the first encrypted key; [[,]]

decrypting, in causing the information processing process apparatus and with the session key, the to bus-decrypt the bus-encrypted third encrypted key encrypted with the second encrypted key and with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, to decrypt the third encrypted key with the second encrypted key; [[,]]

encrypting, in causing the information processing process apparatus and with the third encrypted key, to encrypt the content information transferred to the record and reproduction apparatus; with the third encryption, and

further encrypting, in causing the information to processing process apparatus, to bus-encrypt the encrypted content information with the session key; and send the bus-encrypted sending the further encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 46 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus

~~is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:~~

~~storing the first encrypted key in a causing the record and reproduction apparatus; to store the first encrypted key,~~

~~generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [ , ]~~

~~encrypting, in causing the record and reproduction apparatus, to encrypt the generated second encrypted key with the first encrypted key; [ , ]~~

~~generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [ , ]~~

~~encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the generated second encrypted key; [ , ]~~

~~authenticating, in causing the record and reproduction apparatus, an to authenticate the information processing process apparatus connected to the record and reproduction apparatus; and generate~~

~~generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [ , ]~~

~~further encrypting, in causing the record and reproduction apparatus, to bus encrypt the second encrypted key with the session key; and transfers the bus encrypted~~

transferring the further encrypted second encrypted key from the record and  
reproduction apparatus to the information processing process apparatus; [[,]]  
further encrypting, in causing the record and reproduction apparatus, ~~to bus encrypt~~  
the third encrypted key with the session key; ~~and transfer the bus encrypted~~  
transferring the further encrypted third encrypted key from the record and  
reproduction apparatus to the information processing process apparatus; [[,]]  
decrypting, in causing the record and reproduction apparatus and with the session key,  
~~to bus decrypt the encrypted and bus encrypted~~ content information encrypted with the third  
encrypted key and the session key and supplied from the information processing process  
apparatus; ~~, and~~

causing the record and reproduction apparatus to record the second encrypted key, the  
third encrypted key, and the encrypted content information to the record medium; ~~, and~~  
storing the first encrypted key in causing the information processing process  
apparatus; ~~to store the first encrypted key,~~

authenticating, in causing the information processing process apparatus, ~~to~~  
~~authenticate the record and reproduction apparatus; and generate~~  
generating, in the information processing apparatus, the session key when the  
information processing process apparatus has successfully authenticated the record and  
reproduction apparatus; [[,]]

decrypting, in causing the information processing process apparatus and with the  
session key, the to bus decrypt the bus encrypted second encrypted key encrypted with the  
first encrypted key and with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, ~~to~~  
~~decrypt the second encrypted key with the first encrypted key;~~ [[,]]

decrypting, in causing the information processing process apparatus and with the session key, the to-bus-decrypt the bus-encrypted third encrypted key encrypted with the second encrypted key and with the session key; [[,]]

further decrypting, in causing the information processing process apparatus, to decrypt the third encrypted key with the second encrypted key; [[,]]

encrypting, in causing the information processing process apparatus and with the third encrypted key, to encrypt the content information transferred from the information processing apparatus to the record and reproduction apparatus; with the third encryption, and

further encrypting, in causing the information processing process apparatus, to-bus-encrypt the encrypted content information with the session key; and send the bus-encrypted sending the further encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 47 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in a causing the record and reproduction apparatus; to store the first encrypted key;

reproducing, in the causing the record and reproduction apparatus, to reproduce the second encrypted key encrypted and recorded on the record medium; and decrypt decrypting, in the record and reproduction apparatus, the second encrypted key with the first encrypted key; [,,]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [,,]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the decrypted second encrypted key; [,,]

authenticating, in causing the record and reproduction apparatus, an to authenticate the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [,,]

decrypting, in causing the record and reproduction apparatus and with the session key, to bus decrypt the bus encrypted content information encrypted with the session key and supplied from the information processing process apparatus; [,,]

encrypting, in causing the record and reproduction apparatus, to encrypt the content information with the third encrypted key; [,,]

causing the record and reproduction apparatus to record the third encrypted key and the encrypted content information to the record medium; and

authenticating, in causing the information processing process apparatus, to authenticate the record and reproduction apparatus; and generate

generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; and

encrypting, in causing the information process apparatus and with the session key, to bus encrypt content information transferred to the record and reproduction apparatus; and with the session key and send the bus encrypted

sending the encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 48 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in causing the record and reproduction apparatus; to store the first encrypted key;

generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the generated second encrypted key with the first encrypted key; [[,]]

generating, in causing the record and reproduction apparatus, ~~to generate~~ the third encrypted key; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the third encrypted key with the generated second encrypted key; [[,]]

authenticating, in causing the record and reproduction apparatus, ~~an to authenticate~~ the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus, ~~to bus decript the bus-encrypted content information encrypted with the session key and supplied from the information process apparatus; [[,]]~~

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the content information with the third encrypted key,

causing the record and reproduction apparatus to record the second encrypted key, the third encrypted key, and the encrypted content information to the record medium; [[,]]

authenticating, in causing the information processing process apparatus, ~~to authenticate~~ the record and reproduction apparatus; ~~and generate~~

generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; ~~and~~

encrypting, in causing the information processing process apparatus, to bus encrypt  
content information with the session key; and send the bus encrypted  
sending the encrypted content information from the information processing apparatus  
to the record and reproduction apparatus.

Claim 49 (Currently Amended): A computer-readable medium storing computer-  
readable instructions thereon for recording program of a record method of a record and  
reproduction apparatus that reads information from a record medium and records information  
thereto and an information process apparatus to which the record and reproduction apparatus  
is connected through transfer step, content information on a record medium being encrypted  
according to a content information encryption method using a first encrypted key managed by  
a management mechanism, a second encrypted key unique to the record medium, and a third  
encrypted key generated whenever information is recorded, the computer-readable  
instructions when executed by a processor cause the processor to perform the method  
comprising content information being recorded to the record medium, the record method  
comprising the steps of:

storing the first encrypted key in a causing the record and reproduction apparatus; to  
store the first encrypted key;

reproducing, in causing the record and reproduction apparatus, to reproduce the  
second encrypted key encrypted and recorded on the record medium; and decrypt  
decrypting, in the record and reproduction apparatus, the second encrypted key with  
the first encrypted key; [[,]]

generating, in causing the record and reproduction apparatus, to generate the third  
encrypted key; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the third encrypted key with the decrypted second encrypted key; [[,]]

authenticating, in causing the record and reproduction apparatus, ~~an to-authenticate~~ the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [[,]]

further encrypting, in causing the record and reproduction apparatus and with the session key, to bus encrypt the second encrypted key that has been encrypted and recorded on the record medium; ~~with the session key and transfer the bus encrypted~~  
transferring the further encrypted second encrypted key from the record and reproduction apparatus to the information processing process apparatus; [[,]]

further encrypting, in causing the record and reproduction apparatus and with the session key, to bus encrypt the third encrypted key ~~with the session key and transfer the bus encrypted~~  
transferring the further encrypted third encrypted key from the record and reproduction apparatus to the information processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus and with the session key, to bus decrypt the ~~encrypted and bus encrypted~~ content information encrypted with the session key and supplied from the information processing process apparatus; [[,]]

causing the record and reproduction apparatus to record the third encrypted key and the encrypted content information to the record medium; [[,]]

storing the first encrypted key in the causing the information processing process apparatus; to store the first encrypted key,

authenticating, in causing the information processing process apparatus, to authenticate the record and reproduction apparatus; and generate generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; [[,]]

decrypting, in causing the information processing process apparatus and with the session key, to bus-decrypt the bus-encrypted second encrypted key encrypted with the first encrypted key and the session key; with the session key,

further decrypting, in causing the information processing process apparatus, to decrypt the second encrypted key with the first encrypted key; [,,]

decrypting, in causing the information processing process apparatus, the to bus-decrypt the bus-encrypted third encrypted key with the session key; [,,]

further decrypting, in causing the information processing process apparatus, to decrypt the third encrypted key with the second encrypted key; [,,]

encrypting, in causing the information processing process apparatus and with the third encrypted key, to encrypt the content information transferred from the information processing apparatus to the record and reproduction apparatus; with the third encryption, and

further encrypting, in causing the information processing process apparatus, to bus-encrypt the encrypted content information with the session key; and send the bus-encrypted sending the further encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 50 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information

~~thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:~~

~~storing the first encrypted key in a causing the record and reproduction apparatus; to store the first encrypted key;~~

~~generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [,,]~~

~~encrypting, in causing the record and reproduction apparatus, the to encrypt the generated second encrypted key with the first encrypted key; [,,]~~

~~generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [,,]~~

~~encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the generated second encrypted key; [,,]~~

~~authenticating, in causing the record and reproduction apparatus, an to authenticate the information processing process apparatus connected to the record and reproduction apparatus; and generate~~

~~generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [,,]~~

further encrypting, in causing the record and reproduction apparatus, ~~to bus encrypt~~  
the second encrypted key with the session key; ~~and transfers the bus encrypted~~

transferring the further encrypted second encrypted key from the record and  
reproduction apparatus to the information processing process apparatus; [[,]]

further encrypting, in causing the record and reproduction apparatus, ~~to bus encrypt~~  
the third encrypted key with the session key; ~~and transfer the bus encrypted~~

transferring the further encrypted third encrypted key from the record and  
reproduction apparatus to the information processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus, ~~to bus decrypt~~ the  
~~encrypted and bus encrypted~~ content information encrypted with the third encrypted key and  
the session key and supplied from the information process apparatus; ~~, and~~

causing the record and reproduction apparatus to record the second encrypted key, the  
third encrypted key, and the encrypted content information to the record medium; ~~, and~~

storing the first encrypted key in causing the information processing process  
apparatus; ~~to store the first encrypted key,~~

authenticating, in causing the information processing process apparatus, ~~to~~  
~~authenticate~~ the record and reproduction apparatus; ~~and generate~~  
generating, in the information processing apparatus, the session key when the  
information processing process apparatus has successfully authenticated the record and  
reproduction apparatus; [[,]]

decrypting, in causing the information processing process apparatus, ~~to bus decrypt~~  
~~the bus encrypted~~ second encrypted key with the session key,

further decrypting, in causing the information processing process apparatus, ~~to~~  
~~decrypt~~ the second encrypted key with the first encrypted key; [[,]]

decrypting, in causing the information processing process apparatus, to bus-decrypt the bus-encrypted third encrypted key with the session key; [.,.]

further decrypting, in causing the information processing process apparatus, to decrypt the third encrypted key with the second encrypted key; [.,.]

encrypting, in causing the information processing process apparatus, to encrypt the content information transferred to the record and reproduction apparatus with the third encryption key; , and

further encrypting, in causing the information processing process apparatus, to bus-encrypt the encrypted content information with the session key; and send the bus-encrypted sending the further encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 51 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in a causing the record and reproduction apparatus, to store the first encrypted key,

reproducing, in causing the record and reproduction apparatus, to reproduce the second encrypted key encrypted and recorded on the record medium; and decrypt  
decrypting, in the record and reproduction apparatus, the second encrypted key with the first encrypted key; [.,.]

generating, in causing the record and reproduction apparatus, to generate the third encrypted key; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the third encrypted key with the decrypted second encrypted key; [.,.]

authenticating, in causing the record and reproduction apparatus, an to authenticate the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus;

decrypting, in causing the record and reproduction apparatus and with the session key, to bus decrypt the bus encrypted content information supplied from the information processing process apparatus; [.,.]

encrypting, in causing the record and reproduction apparatus, to encrypt the content information with the third encrypted key; [.,.]

causing the record and reproduction apparatus to record the third encrypted key and the encrypted content information to the record medium; , and

authenticating, in causing the information processing process apparatus, to authenticate the record and reproduction apparatus; and generate

generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; and

encrypting, in causing the information processing process apparatus and with the session key, to bus encrypt content information transferred to the record and reproduction apparatus; with the session key and send the bus encrypted

sending the encrypted content information from the information processing apparatus to the record and reproduction apparatus.

Claim 52 (Currently Amended): A computer-readable medium storing computer-readable instructions thereon for recording program of a record method of a record and reproduction apparatus that reads information from a record medium and records information thereto and an information process apparatus to which the record and reproduction apparatus is connected through transfer step, content information on a record medium being encrypted according to a content information encryption method using a first encrypted key managed by a management mechanism, a second encrypted key unique to the record medium, and a third encrypted key generated whenever information is recorded, the computer-readable instructions when executed by a processor cause the processor to perform the method comprising content information being recorded to the record medium, the record method comprising the steps of:

storing the first encrypted key in a causing the record and reproduction apparatus; to store the first encrypted key;

generating, in causing the record and reproduction apparatus, to generate the second encrypted key; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the generated second encrypted key with the first encrypted key; [[,]]

generating, in causing the record and reproduction apparatus, ~~to generate~~ the third encrypted key; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the third encrypted key with the generated second encrypted key; [[,]]

authenticating, in causing the record and reproduction apparatus, ~~an to authenticate~~ the information processing process apparatus connected to the record and reproduction apparatus; and generate

generating, in the record and reproduction apparatus, a session key when the record and reproduction apparatus has successfully authenticated the information processing process apparatus; [[,]]

decrypting, in causing the record and reproduction apparatus, ~~to bus decript the bus-encrypted~~ content information encrypted with the session key and supplied from the information processing process apparatus; [[,]]

encrypting, in causing the record and reproduction apparatus, ~~to encrypt~~ the content information with the third encrypted key; [[,]]

causing the record and reproduction apparatus to record the second encrypted key, the third encrypted key, and the encrypted content information to the record medium; [[,]]

authenticating, in causing the information processing process apparatus, ~~to authenticate~~ the record and reproduction apparatus; ~~and generate~~

generating, in the information processing apparatus, the session key when the information processing process apparatus has successfully authenticated the record and reproduction apparatus; ~~, and~~

encrypting, in causing the information processing process apparatus and with the session key, to bus encrypt content information; and with the session key and send the bus-encrypted

sending the encrypted content information from the information processing apparatus  
to the record and reproduction apparatus.

Claim 53 (Previously Presented): A system for recording encrypted audio visual data on a medium comprising:

a drive for recording an information onto the medium and a host computer, connected to the recorder, to control said drive wherein  
said drive includes:

a random number generator for generating a random number;  
a first transmitter for transmitting said random number;  
a recording unit for recording said random number onto the medium; and

said host computer includes:

a first receiver for receiving said random number;  
an encrypting unit for encrypting audio visual data using said receiving random number;  
a second transmitter for transmitting said encrypted audio visual data to said drive; and

wherein said drive further includes:

a second receiving unit for receiving encrypted audio visual data transmitted by said second transmitting; and  
said recording further recording audio visual data received by said second receiving unit onto the medium.